ACQUISITION AND CONTRACTING STRATEGIES TO REDUCE DEPOT MAINTENANCE AND REPAIR COSTS – AN INTEGRATED APPROACH

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Introduction

The readiness of Air Force weapons systems has been jeopardized for several years by the lack of spare parts and repair parts. Since 1991, the Air Force has experienced a steady decline in aircraft mission capable status from an average of 83% to an average today of 73%.[1]

General George T. Babbitt
Commander
Air Force Material Command
October 7, 1999

Historical Perspective

Military history is replete with examples of the impact of logistics planning and support upon the success or failure of military operations. These impacts have been felt across all branches of the military services. The most significant historical examples come from the war on the ground during World War II (WWII).

Field Marshall Erwin Rommel observed that, "The battle is fought and decided by the quartermaster before the shooting begins."[2] During the North African campaigns, the Axis forces spearheaded by Rommel's *Afrika Corps,* achieved at least two massive ruptures of the British defenses. However, Rommel was unable to turn these tactical successes into strategic victories because of the inability of his logistics support forces to supply adequate spare and replacement parts for his combat and combat support commands. The result of the inability to exploit these tactical successes early in the war

was the major factor that cost the Axis the North African Theater and its oil reserves. A similar occurrence manifested itself with the Allies during the invasion of Europe. General Patton's U.S. Third Army, after breaking out of the Normandy pocket and rolling up the eastern flank of the German army, was in the process of preventing the retreat of two complete German Armies in France. This maneuver was halted on September 2, 1944 because the Third Army had completely exhausted its logistics support. The inability to prevent the retreat of the Axis forces in France allowed the German High Command to extract and consolidate these forces for continued operations against the Allies. It is generally accepted that the halt of Patton's army extended the war in Europe an additional eight months.[3]

Recent Lessons

Observation of the recent success of the air war in Serbia could lead to the conclusion that there is no parallel to the success of that campaign and the opportunities lost fifty years previously in North Africa and Europe. The recent air war over Serbia employed over 400 U. S. Air Force aircraft. Supply support was good, parts were available, and re-supply was handled quickly and efficiently. Looking deeper into the Serbian air war, however, reveals some additional truths. To some extent, success in the Serbian air war was achieved at the expense of other non-engaged units, training units, and combat and combat support units in other theaters.[4] Training and readiness spare and replacement parts were diverted to the Serbian air war to ensure its success. Similar shifts of replacement and spare parts have occurred to support operations in the Northern and Southern Watch operations in Iraq. Continued use of this strategy will erode logistics support capabilities to the point that the Department of Defense (DoD) will be unable to

support its two Major Regional Conflict (MRC) planning commitments. In point of fact, the logistics community is overextended in its ability to support current operations. In testimony to the Senate Appropriations Subcommittee on Defense, the Honorable William Cohen stated,

> "On the Major Theater War (MTW) capability, we have always tried to structure our forces in a way that we could handle two nearly simultaneously. We have never been structured to handle three. What we have now in Kosovo is roughly a major theater of war underway – an air war campaign. That means we are at three Major Theater Wars rather that just two… we did not plan for this. We would have to make a number of adjustments should another [Major Theater War] erupt simultaneously [with our existing commitments]".[5]

Secretary of Defense William Cohen's testimony to the Senate Appropriations Subcommittee on Defense underscores the challenges faced by the logistics community in providing support to the war fighters. Current war fighter commitments combined with the lack of the replacement spares in the supply system that are required to fill the rapid re-supply pipeline to the war fighters will continue to force the logistics community to tap into war readiness and maintenance spares of units in uncommitted theaters. The long-term impact of these decisions is difficult to accurately quantify, but a growing readiness shortfall is evident – the inability to meet our two MRC planning commitments.

The Budget Cycle

The DoD is a service business whose primary product is to provide for the security of the United States of America and its citizens. Like all business, success depends on capitalization and cash flow. The inability of U.S. military forces to engage, sustain, and prevail in the early years of World War II, Korea, and Vietnam and to a lesser degree Panama, Granada, and Haiti bear unmistakable testament to the unplanned

result of the desire of Congress to reduce the cost of the national defense. Spare and replacement parts shortages are predictable occurrences within the DoD logistics community as Congress restructures its budget emphasis after the conclusion of major theater wars or military operations other than war. Prior to 1991, these budget reductions were coupled with a conscious foreign policy effort within the Executive and Legislative Branches to reduce commitments worldwide – for example, the WWII, Korea, and Vietnam post-war personnel, equipment, and worldwide deployment reductions. Under the current administration, there has been continual erosion of the defense budget and an expansion of Air Force commitments – Bosnia air-over-watch, Kosovo air-over watch, and Iraq northern and southern air-over watch, along with humanitarian operations in Africa, Turkey, and Venezuela while maintaining our commitments in Asia, Europe, and the Middle East.

Today, we see the continuance of a long-term trend that reduces force structure and logistics support budgets while our worldwide military commitments grow. Presently, the U.S. Air Force is supporting 400 percent more deployments with 33 percent less force structure than was available ten years ago.[6] It is evident that current FY 2000 budget allocations will exacerbate the problems of war fighter support. The funding levels are inadequate to provide for timely depot maintenance and repair of replacement parts and to procure spare and replacement parts to replace those items taken from units in uncommitted theaters to support current war fighter commitments and operational tempos. In fact, the current budget allocations do not include the funding to rotate or return any troops from the Kosovo Theater of Operations or to replace any items lost to date in that operation.[7] The loss of these item replacements, in addition to existing

shortfalls, will worsen the logistics community's ability to maintain and sustain combat and combat support operations whether falling under the definition of major theater war or military operations other than war.

What are the impacts of continued budget reductions upon the ability of the logistics community to provide serviceable spare and replacement parts to engaged units, training units, and combat and combat support units in other theaters? Logisticians, due to the conservative nature of logistics support contingency planning, are rarely satisfied with the on-hand levels of replacement and maintenance parts; however, today the issue is not "what if …", but "what is". Presently, there are insufficient maintenance and consumable items in the logistics inventory to support current commitments and "best-case" planning contingencies. This situation will worsen. Most obvious are the impact upon available reparable spares (D041 items – exchangeable, field replaceable units) [8] and the significant shortfalls in Defense Logistics Agency (DLA) procured and managed common maintenance items (Class IX—consumable spare parts), which are used by depot maintenance and repair facilities in support of their assigned workloads. [9]

The number of publicly owned depot facilities and their manning has been reduced and additional reductions are targeted. In 1987, DoD had 1,127,000 civilian employees that were directly or indirectly involved in depot maintenance. In 1999, that number was down to 747,000, with an out year target of further reducing an additional 106,000 employees and privatizing another 229,000 positions.[10] These shortfalls are planned to be made up by contracting additional depot maintenance and repair work to the civilian sector. The timely implementation and ultimate success of this contracting

strategy is in doubt because these efforts are subject to Executive Branch manipulation.[11,12,13]

The Challenge

The purpose of this introduction has been to place in context the historical significance of logistics planning regardless of service branch, identify current events that describe the present status of Air Force logistics support, and to define the challenges facing the Air Force Material Command when preparing to support worldwide mission support requirements well into the next century. Historically, DoD budget planners have attacked logistics support issues piecemeal with no identifiable cohesive end-goal strategy. Without greater attention to resolving the set of problems relating to maintenance and repair item shortfalls, the concepts of JV 2010 and our capabilities to perform mission assignments are in jeopardy. The emphasis and focus of this research is Air Force logistics, specifically restructuring major weapon system acquisition strategies and depot maintenance and repair contracting practices to obtain the most efficient use of the funds budgeted through 2025 in order to support Air Force commitments worldwide. The lessons learned and recommended actions are applicable to all service branches.

Notes

[1] Testimony of General George Babbitt, Commander, Air Force Material Command, to the House Armed Service Committee on Military Personnel and Spare Parts Shortages, October 7, 1999.

[2] *The Rommel Papers* as quoted by Lt. Colonel Karen S. Wilhelm, USAF, and "An Historical Perspective on the Future of Military Logistics". *Air Force Journal of Logistics*, Volume XXI, Numbers 3 and 4, Page 36.

[3] Lt. Colonel Karen S. Wilhelm, USAF, "An Historical Perspective on the Future of Military Logistics". *Air Force Journal of Logistics*, Volume XXI, Numbers 3 and 4, Pages 37-38.

[4] General George Babbitt, October 7, 1999.

Notes

[5] Testimony of the Honorable William Cohen, Secretary, Department of Defense, to the Defense Subcommittee of the Senate Appropriations Committee holding a Hearing on the FY 2000 Budget, May 11, 1999, Page 43 of 47.

[6] Statement of General George Babbitt Jr., Commander, Air Force Material Command, during testimony to the Defense Subcommittee of the Senate Appropriations Committee hearing on Air Force Depot Maintenance, March 3, 2000, Page 12 of 26.

[7] Testimony of the Honorable William Cohen, Secretary, Department of Defense, to the Defense Subcommittee of the Senate Appropriations Committee holding a Hearing on the FY 2000 Budget, May 11, 1999, Page 46 of 47.

[8] Ibid. Page 42 of 47.

[9] Statement of Lt. General Henry T. Glisson, USA, Director, Defense Logistics Agency to the House Armed Service Committee on Military Procurement Logistics Capabilities and Shortfalls, February 25, 1999.

[10] Statement of the Honorable Daniel K. Inouye, Ranking U.S. Senator, Democratic Member of the Defense Subcommitee of the Senate Appropriations Committee holding a hearing on the FY 2000 Defense Budget, May 11, 1999, Page 42 of 47.

[11] "The Air Force Steps in to Help Save Two Depots", *Air Force Times*, Volume 58, Issue 41, Page 28, May 18, 1998.

[12] Committee Hearing by the House Committee on National Security regarding Air Force Depot Maintenance Workload, Page 4 of 44, June 4, 1998.

[13] Committee Hearing by the Defense Subcommittee of the Senate Appropriations Committee hearing on Air Force Depot Maintenance, March 3, 2000, Page 1 of 26.

Section 2

Discussion

> *Depot maintenance and repair does not include the procurement of major modifications or upgrades of weapon systems that are designed to improve performance or parts for safety modifications. Depot maintenance and repair does include material maintenance or repair requiring the overhaul, upgrading, or rebuilding of parts, assemblies, or subassemblies, and the testing and reclamationof equipment as necessary, regardless of the source of funds for the maintenance or repair.*[14]

During the cold war years, the U.S. Air Force nurtured and grew a large government owned and operated depot maintenance and repair system. The strategy was to establish depot maintenance and repair complexes throughout the contiguous forty-eight states. Each facility contained at least the kernel capability – facilities, equipment, and skilled personnel – to support most workload categories common to airborne weapons systems. In workload categories such as jet engines, complete redundant repair capabilities were established at San Antonio Air Logistics Center (ALC) and Oklahoma City ALC. Redundant maintenance and repair capabilities were established across the Air Logistics Centers as a safeguard against any depot maintenance or repair capability that might be lost during wartime. Defense contractors – major weapon system manufacturers – were occasionally used as overflow or contingent depot maintenance and repair capacity.[15] In some cases aircraft Periodic Depot Maintenance (PDM) and modification contracts were

awarded to major weapon system manufacturers in order to retain workforce skills, knowledge, and abilities during the ebbs and flows of new weapons system acquisition.[16]

Use of Public and Private Facilities

Depot maintenance and repair is performed in both organic (government-owned and operated) and contractor (civilian-owned and operated) facilities. Public Law dictates the amount of funds that may be made available for organic and contractor depot level maintenance and repair. Effective with the National Defense Authorization Act of FY 1998, up to 50 percent of the funds made available during a fiscal year for depot-level maintenance or repair workload may be used to contract with civilian sector depot maintenance and repair service providers.[17] This is also known as the 50/50 rule. Prior to this act, only 40 percent of the funds were made available to the civilian sector (60/40 rule). This change in public law provides depot maintenance and repair support planners the opportunity to identify and develop long-term relationships with civilian sector service suppliers in order to reduce fixed cost expenditures in government owned depot facilities for equipment and manpower.

Some depot maintenance and repair work is not available for work by civilian facilities. The Congress of the United States through Public Law has directed the Secretary of Defense to identify those logistics capabilities that must be retained in government-owned and operated facilities to ensure that a ready and controlled source of trained and skilled manpower, adequate facilities, and the equipment and tooling necessary are available to perform effective and timely depot maintenance and repair activities in response to national defense requirements.[18] These requirements are defined as 'Core Logistics Capabilities'. Public Law prescribes the specifics of these

relationships. The capability to perform core depot maintenance and repair work must be established as an organic (government-owned) capability. Once the organic capability is established, however, the remainder of the depot maintenance and repair workload may be identified by the Secretary of Defense as a candidate for contracting through competition in accordance with the guidelines provided in Office of Manpower and Budget Circular A-76[19, 20]

Contracting Workloads

Depot maintenance and repair workloads being performed in government facilities cannot be awarded to contractor facilities without completing a specifically defined competitive process. The Congress of the United States through Public Law has directed the Secretary of Defense to ensure,

> "...that the performance of a depot-level maintenance or repair workload whose value is not less than $3,000,000 is not changed to performance by a contractor or by another depot-level activity of the DoD unless: (1) the change is made using merit-based selection procedures for competitions across all depot-level activities of the DoD or (2) competitive procedures for competitions among private and public sector entities".[21]

The contracting efforts performed under this authority typically involve workloads that exhibit a high degree of homogeneity and utilize the identical or similar equipment and repair or special industrial processes such as metal forming and corrosion protection. These are efficient workloads to support because of the high degree of similarity of facility, equipment, and manpower skill, knowledge, and abilities required to support the entire workload mix. For example, F-100 engine overhaul is considered a core workload. As such, this capability must be maintained organically by a government owned and managed depot maintenance and repair facility. Therefore the DoD using the merit

selection process retained 24% of this work as organic capability and the remainder of the work is subject to competitive procedures for competitions between civilian and government sector entities[22, 23] The strength of this approach is that it provides a cost-efficient mechanism for establishing redundant depot maintenance and repair capabilities at competitive marketplace price rates.

A special case has been established for contracting the workloads of government depot maintenance and repair installations that were closed or realigned under the Defense Base Closure and Realignment Act of 1990. The Congress of the United States, through Public Law, has directed the Secretary of Defense to ensure the, "Use of competitive procedures in contracting for performance of depot-level maintenance and repair workloads formally performed at certain military installations."[24] These competitive procedures would exclude:

1. Those workloads consolidated to another DoD installation.
2. A core workload as described and excepted by Title 10 of the United States Code Section 2464.
3. Any contract entered into prior to the date of the enactment of the National Defense Authorization Act for FY 1998 [enacted November 18, 1997].[25]

The workloads not subject to exclusion may be offered as a single, combined solicitation if the Secretary of Defense determines that the individual workloads cannot logically or economically be completed without combination by depot maintenance and repair sources potentially qualified to submit an offer and be awarded a contract to perform those individual workloads.[26] This wording encouraged the DoD to offer contract solicitations of workloads from government installations closed or realigned by the Defense Base Closure and Realignment Act of 1990 that are inefficient workloads to

support because of the low degree of similarity of facility, equipment, and manpower skill, knowledge, and abilities required to support the entire workload mix.

For example, on March 20, 1998 the Air Force issued a solicitation for the purpose of conducting a public-private (government-civilian) competition for various aircraft and commodity depot maintenance and repair workloads being performed at Sacramento ALC. The Government Accounting Office, GAO, concluded that the dissimilarity, or lack of homogeneity, of the work scope served to discourage civilian sector bidders [which could have prevented the DoD from securing the most advantageous contract pricing].[27] The Air Force received one civilian sector proposal from Lockheed Martin Corporation and one government sector proposal from Ogden ALC. On September 28, 1998 the Air Force selected the Ogden ALC proposal as the best value to the government.[28] The net effect of this process is the retention of government funded and operated depot maintenance and repair depots with their inherent inefficiencies and the active exclusion of potential civilian contractors by making the price of entry into the marketplace too high – an outcome actively sought by many DoD military and civilian planners.[29] The difficulties encountered when transferring these types of workloads to other government or civilian owned depot maintenance and repair facilities was highlighted by General Lester Lyles in his testimony to the House Armed Service Committee when he stated that, " [Air Force officials] ... literally, thoroughly underestimated what it would take to move workload from Kelly [AFB, Texas] and Sacramento [ALC, California]."[30]

Workload Allocation

During February 1999, the DoD submitted a report to Congress regarding the distribution of depot-level maintenance and repair workloads for FY 1998. DoD expenditures for depot-level maintenance and repair activities were approximately $13,600,000,000 [5% of the total 1998 DoD budget].[31] The reported workload distributions are provided in Table 1.

Table 1. Reported FY 1998 Depot Maintenance Workload Distributions[32]

Organization	Government Sector $/%	Civilian Sector $/%
Army	$941.1/ 54.4%	$788.2/ 45.6%
Navy (includes Marine Corps)	$3,748.2/ 58.3%	$2,682.7/ 41.7%
Air Force	$3,328.6/ 58.0%	$$2,408.2/ 42.0%
Defense Intelligence Agency	$0.061/ 100.0%	0/ 0
U.S. Special Operations Command	$137.2/ 70.2%	$58.2/ 29.8%
TRICARE	0/ 0	$30.7/ 100.0%

This report of depot maintenance workload distribution was found by the GAO to contain numerous instances of inaccurate and inconsistent reporting of workloads. The net effect of this reporting presented approximately 10% of the $13,600,000,000 expenditures for depot maintenance and repair during FY 1998. Despite the inaccurate and inconsistent reporting of workloads, the Air Force was praised for taking significant steps toward improving their data collection and reporting processes.[33] The GAO report provides Congressional planners the impetus to believe that Air Force cost accounting systems will continue to improve and provide a basis for easier comparison with civilian accounting systems.

DoD estimates concerning out-year government and civilian sector workload distribution is conservative and pose a concern to Congressional planners. In his charge to DoD planners, the Honorable Strom Thurmond, Chairman, Senate Committee on Armed Services stated, "Although [the] DoD is not required by statute to report estimates of future [depot maintenance and repair] workload mixes, it is essential that the DoD maintain this data to support [Congressional] oversight and management of depot maintenance activities and to monitor compliance with Title 10 United States Code Section 2466".[34] The DoD out-year workload estimates in a 1998 report to Congress are shown in Table 2.

Table 2. Forecasted Depot Maintenance Workload
Distributions (% Government/% Civilian)[35]

Organization	1999	2000	2001	2002	2003
Army	61/39	60/40	59/41	62/38	64/36
Navy (includes Marine Corps)	62/38	64/36	63/37	65/35	67/33
Air Force	55/45	55/45	55/45	55/45	55/45
Defense Intelligence Agency	100/0	100/0	100/0	100/0	100/0
U.S. Special Operations Command	18/82	20/80	21/79	28/72	28/72

Air Force Material Command (AFMC) planners project a 90% utilization rate of government owned and operated depot maintenance and repair facilities between the 2001 and 2005 timeframes as compared to 1997 and 1998 documented utilization rate figures of 65%.[36] Brigadier General Stan Sieg, Director of Logistics, AFMC, cited the command's 'Core-Plus Strategy' as the vehicle for creating the correct balance of depot facilities, resources, and maintenance and repair work. The core plus strategy combines the requirements of Title 10 United States Code Section 2464 and "other work that is not vital to war fighting readiness".[37] By definition, the AFMC core plus organic workload

strategy will cost more – facility, equipment, and manpower – than the core workload strategy supported by Congress. The planned result of this strategy is reflected in the 'flat', or unchanging, Air Force government and civilian depot maintenance and repair workload distributions shown in Table 2. The actual result will be a net Air Force depot maintenance and repair cost greater than supported by Congressional planners, whose budgets are constructed around core workload depot maintenance and repair support requirements. The primary sources of these cost increases will be the expenditure of Air Force depot support resources on non-core workload support and dependence upon high-cost traditional contractors (major weapon system manufacturers) to provide additional core workload depot maintenance and repair activities.

Contracting Barriers

Presently, contracting depot maintenance and repair to the civilian sector represents a significant challenge to logistics support planners. This is because most depot maintenance and repair work is currently performed on noncommercial, DoD unique items. Typically, defense contractors that manufacture major weapon systems are awarded contracts for this work. This is because there are insufficient competitive pressures within the marketplace in the present economy to motivate civilian entrepreneurs to develop depot maintenance and repair capabilities for non-standard, military-unique items and tasks. Over ninety percent of the existing Air Force depot maintenance and repair contracts were awarded noncompetitively, mostly to the original equipment manufacturers.[38] These awards reflect the difficulty for civilian contractors, without specific item or system knowledge, to enter the depot maintenance and repair marketplace. These noncompetitive contract awards to the original equipment

manufacturers erect a significant barrier to open competition, which result in significantly higher per unit maintenance and repair costs when compared with equivalent civilian marketplace commercial contracts.

Logistics Support Planning Decisions

Logistics support planning for major weapon systems begins during systems acquisition. These decisions determine over one-half of the Life Cycle Cost of the weapon system.[39, 40] Inputs to these planning decisions are provided in the form of lessons learned by the using commands and AFMC from previous deployments of similar systems and components and new support requirements supplied by the weapon system manufacturer. Weapon system design decisions determine the applicability of the major subsystems and their components to the Core Logistics Rule that requires at least partial government owned and operated depot maintenance and repair support of the workloads. Air Force System Program Offices (SPO) provide inconsistent consideration to logistics support issues.[41] During new Air Force system procurements, logistics officers consult with system program officers to provide technical input and expertise regarding the supportability and maintainability of the new major weapon system. These consulting activities began in earnest during the A-10 and F-16 acquisition cycle in a effort to improve these new weapon systems by reducing failure rates and improving system and subsystem maintainability.[42]

To date, these activities have had mixed results with a low degree of satisfaction felt in both the acquisition and logistics communities. In two recent acquisitions, the B-1B and the C-17, the logistics community officials expressed concerns that source-of-repair decisions had been made by the system program officials leaving the logisticians no

creditable short-term option other that to implement and manage decisions in which they had no part.[43]

The root cause of poor source-of-repair decisions is the unavailability of information. Air Force information systems do not collect and present causal information for reliability and maintainability failures. Without the causal data it is all but impossible for the acquisition and logistics communities to postulate corrective and preventative actions and incorporate them into a bid specification and later into source-of-repair decisions.

Once a weapon system is deployed, AFMC system and item managers can pursue alternate depot maintenance and repair options and seek more cost effective system support solutions. Such decisions are rare because of: (1) the high start-up costs involved in developing alternate depot maintenance and repair capabilities and (2) the politics involved in moving a major workload from an Air Force managed depot maintenance and repair facility. One of the primary contributors toward the inability of AFMC managers to openly compete depot maintenance and repair workloads is that in many cases the Air Force does not own the technical data for the weapons system or its major subsystems and components. The lack of technical data and legal rights to the data limits the depot maintenance and repair options available to the system or item manager.

The limiting of depot maintenance and support options available contributes toward higher than forecasted system life-cycle costs.[44] These increased costs are a result of limiting the competitive options for obtaining depot maintenance and repair services, thereby reducing downward pricing pressures on the original equipment service and replacement part suppliers. The decision logic to forgo technical data procurement during major weapon system procurement is the expectation by the System Program Office

(SPO) managers that the data would be purchased by the system end user or the logistics community as the needs arise. This logic is not supported by historical reality because: (1) There is no funding budgeted to purchase the data after weapon system is procured, (2) There is no motivation on the part of the original equipment manufacturer (OEM) or supplier to sell the data, and (3) AFMC managers have no leverage to encourage the OEM to sell the required data to the Air Force.[45, 46]

Commercially available subsystem and major system component depot maintenance and repair support options are not constrained by the Core Logistics Rule for government owned and operated depot maintenance and repair support. System program officers and logistics community managers routinely fail to take advantage of the provisions of Title 10 United States Code Section 2464 that allows the DoD to exclude all commercial items that are part of a new or existing system deployments from the core logistics capabilities requirement for government-owned depot maintenance and repair.[47] In order for items to be considered 'commercial', at least 90% of their components must be common to equipment in non-DoD applications. It requires diligence by weapons system officials and logistics community managers to verify the commercial 'pedigree' of the item or component.

The lessons gained by the Navy in declaring that the V-22 T406 engine was a commercial item is an example of the need for due diligence by all service components when making these decisions. After contract award, GAO analysis of the T406 engine bill of material indicated a commercial parts commonality of 79%, which did not agree with the contractor's figure of 90%. The GAO further concluded that the accuracy of the Navy's life cycle cost comparisons between civilian and government contractor depot

maintenance and repair support alternatives for T406 depot maintenance and repair was questionable due to data errors and omissions. The cause for these errors and omissions was unfamiliarity of Navy logistics planners with the T406 engine and excessive dependence upon contractor provided data.[48]

In order to make depot maintenance and repair contracts more attractive to civilian contractors, the Air Force occasionally agrees to provide the contractor with repair parts and materials from the Air Force supply system. These practices generally require increased AFMC management attention to assure that the materials are available as required, that material accountability is maintained, and that the contractor does not use excessive quantities of Government Furnished Material (GFM). There are GAO documented cases where the GFM required to support contracted depot maintenance and repair was not provided in a timely manner causing the contractor to endure cost overruns, which resulted in lawsuits against the Air Force for damages.[49] For example, Warner Robins ALC had a $113.2 million cost overrun by a civilian contractor on F-15 contract maintenance work that was directly related to the timely availability of GFM. In a similar instance, the Air Force paid $24.9 million to settle claims related in part for the failure to provide GFM in a timely manner to another civilian contractor.[50]

Privatization

As a result of the 1995 Defense Base Closure and Realignment Commission Report, Kelly Air Force Base (AFB), Texas, was to be realigned and San Antonio ALC, which includes the depot maintenance and repair facility, was to be closed by 2001. Additionally, McClellan AFB and Sacramento ALC, which include the depot maintenance and repair facility, were to be closed by July 2001. In compliance with the

Base Closure and Realignment Commission Report as endorsed by Congress, the workloads were to be offered by solicitation to be performed by a civilian sector contractor or by another government owned depot-level activity.[51]

As a result of direct Executive Branch intervention, significant portions of the workloads of these two depots were subject to efforts to keep them in San Antonio and Sacramento. As reported in the Air Force Times, " … the White House and the Air Force are urging airplane maker Lockheed-Martin Corporation "... to bid and win" a contract that would keep aircraft maintenance work at McClellan AFB. The Air Force already has offered to team up with Lockheed-Martin to bid for contracts that would keep open a depot at Kelly Air Force Base, Texas".[52] The Congressional membership was particularly irked to learn of an April 29, 1998 letter, written by Acting Air Force Secretary F. Whitten Peters to Dr. Hamre, outlining a request by the White House to keep the depots open.[53, 54]

The 'presidential wildcard' and election-year politics negatively impact the most sound logistics support budgeting and planning—as clearly demonstrated in the case cited above. During the past six years, political infighting between the Executive and Legislative Branches of the United States Government has no doubt been the greatest single hindrance to successfully implementing a long-term logistics support plan. This hindrance manifests itself as "politically correct" budgets and plans that rarely reflect the actual requirements of worldwide mission support commitments and war readiness plans. The cost for readiness, deployment, employment, and sustainment of U.S. military forces is a high price to pay for political manipulation and favoritism.

The mechanism that enabled the Executive Branch's manipulation of the Base Closure and Realignment Report findings was Title 10 United States Code Section 2469a. This portion of the Code allows the complex, highly diverse workloads of a maintenance and repair depot, which had been closed or re-aligned, to be grouped into a single solicitation. The activity is described as 'privatize-in-place'. The privatize-in-place concept is not new. It was previously used to contract operations at the Aerospace Guidance and Metrology Center (AGMC) in Newark AFB, Ohio during 1996.[55] In the case of AGMC, the workload mix had a high degree of similarity and was maintained by a highly trained and motivated workforce whose skill, knowledge, and abilities were complimentary and interchangeable.[56] This particular contract did not enjoy significant cost reduction success because Air Force guidance stipulated that personnel reductions would be minimized (attrition through retirements and resignations was preferred) to reduce the economic impact on the surrounding communities.[57]

In the case of the solicitations for the workloads at San Antonio ALC and Sacramento ALC, the workloads were highly diverse and required an equally diverse workforce skill, knowledge, and abilities mix. These requirements discouraged new civilian contractor participation because of the high start-up costs of facility, equipment, and personnel. Again, in-place job retention was the motivator for Executive Branch manipulation of decisions acted into Law by the U.S. Congress. Congress viewed the privatization-in-place of the two depots as collaboration between the White House and the Air Force to subvert the wishes of Congress and keep the bases from closing.[58] At the request of Congress, the GAO reviewed the solicitations and contract awards. The GAO concluded that the Air Force met the requirements of the applicable laws and regulations

in the competition for depot maintenance work at the Sacramento ALC. However, the GAO observed that in future activities, the Air Force should provide better documentation for key cost estimates and use more accurate or appropriate data for cost comparisons.[59]

The impact of the GAO conclusions is clear. The Air Force must provide a more rigorous and auditable approach toward the analysis and decision making process with regard to the selection of depot maintenance and repair service providers. Otherwise, the Air Force may not be able to justify the dollar savings implications of contract awards, thereby discrediting itself in the eyes of Congressional budgeting officials. The significance of the loss of credibility with Congressional budget planners is self-evident. Without credibility, budgets for depot maintenance and repair activities will be increasingly difficult to obtain and the gap between war fighter support requirements and logistics support capabilities will continue to widen.

Public-Private Partnerships

The DoD, Congress, and the civilian sector have shown interest in partnering arrangements as a tool to address excess depot maintenance and repair capacity and to gain access to specialized, civilian-owner maintenance and test equipment for military-unique systems and system components. Partnering arrangements include, but are not limited to: (1) use of civilian sector facilities and employees to perform work or produce goods for the government sector; (2) civilian sector use of government depot equipment and facilities to perform work for either the civilian or government sector; (3) work-sharing arrangements, where the civilian and government sectors share a depot workload using both civilian and government sector facilities, equipment, and/or employees. In the

1998 Defense Planning Guidance [for Strategic Plans], DoD directed the services to encourage commercial firms to enter into partnerships with depots to reduce excess capacity, overhead burdens, and to maintain critical skills. In the 1998 Quadrennial Defense Review, DoD committed to the use of in-house facilities to partner with industry in order to preserve depot-level skills and use excess depot capacity.[60]

In concept, these partnerships should stabilize or reduce per unit maintenance and repair costs and provide for a flexible, well-trained workforce with some methods improvement and training costs absorbed by the private sector partner. In reality, they retain the close relationship between the major weapons system contractors and the Air Force --a relationship proven to be expensive and a major barrier to the entry of new players into the depot maintenance and repair marketplace.

Congress has passed multiple laws that provide authority for partnering at public depots.[61] Some of the service branches have actively pursued these relationships. For example, in the mid-1990s the Army entered into six partnering contracts that whose total value exceeded of $5 million. In contrast, Air Force officials had not approved any partnering contracts through late 1998 because of their interpretation of the laws that provide the authority for partnering at public depots. The analysis of Air Force logistics planners concluded that the Air Force was prohibited from contracting maintenance or services if they were available from a commercial, domestic source.[62] The conclusions drawn from these analyses reflected the bias of senior Air Force officials who preferred to keep as much depot maintenance and repair work as possible in government owned facilities with the work performed by government employees. This reluctance to enter into partnering arrangements was reversed during late 1998 with an award of a $1.6

billion contract for repair of the KC-135 and condition inspections of the A-10 by a public-private partnership comprised of Hill Air Force Base, Utah and the Boeing Company. In early 1999, the Air Force awarded a 15-year, $10.1 billion F-100, TF39, and TF46 engine repair contract to Tinker Air Force Base, Oklahoma and its partner, Lockheed Martin Corporation.[63] Congress and the GAO supported the Air Force decision to award the engine repair contract to Tinker Air Force Base, Oklahoma and its partner, Lockheed Martin Corporation over their only civilian sector competitor, Pratt and Whitney Company.[64]

Current Air Force Material Command (AFMC) Initiatives

The AFMC planners and managers acknowledge Congressional and customer pressures to reduce depot maintenance and repair costs, provide faster deliveries, and to supply less costly materials. This acknowledgment is reflected in the initiatives presented at the AFMC Summer 1999 Commanders' Business Conference. The AFMC Strategic Plan uses the Air Force Strategic Plan as its basis. The commitment of AFMC is reflected in its POM submittals and the articulation of specific performance initiatives. The primary mission essential task is to, "provide government owned and operated depot repair capability for fielded and emerging weapons systems". Other initiatives to support the war fighter include cost reduction, more timely support, procurement of additional replacement spare parts, new facility construction, improvement of the maintenance of existing facilities, upgrading facility and equipment, and providing for an efficient, trained, and responsive workforce.[65]

Specific to stockage and item issue effectiveness—on-hand stock issues versus unfilled stock requests—AFMC plans to increase its effectiveness by 10% during the

next five years.[66] The minimum lead-time from budget enactment to delivery of significant quantities for replacement spare parts is four to seven years.[67] To provide for a faster turnaround of serviceable maintenance and repair items to the end users, AFMC plans to reduce maintenance and repair flow days by 36% and reduce quality defect rates during the next five years.[68] The accomplishment of these productivity and quality initiatives will require long-term efforts in work methods improvement, new equipment, and manpower recruiting and training activities.

These initiatives appear to draw a cautious line between supporting operational and training requirements within politically supportable mission planning and funding guidelines. AFMC carefully distinguishes that these initiatives are proposed objectives and are perhaps, with refinements, goals. The reason is obvious. To increase supply and issue effectiveness, large (presently unbudgeted) dollar amounts must be spent on replacement spare parts and other maintenance items. To reduce maintenance flow days and reduce quality defect rates, a well-trained and motivated workforce is required. Such a workforce requires large (presently unbudgeted) dollars to recruit and train. To accomplish these initiatives, AFMC appears to be depending on mercurial commitments from the Executive Branch to reduce worldwide military deployments and to increase funding levels in order to improve the balance between end-user needs and supply system capabilities.

Notes

[14] National Defense Authorization Act for FY 1998, Subtitle D—Depot-Level Activities, Section 2460, Subsections (a), (b) and (c), October 18, 1997.

[15] Examples of the use of this contractor capacity include depot maintenance -- Periodic Depot Maintenance (PDM) -- and modification programs for the KC-135 at Boeing in Washington and C-130 at Lockheed in Georgia.

Notes

[16] An example of this workforce retention strategy is the B-58 depot maintenance and repair program at General Dynamics in Texas occurred prior to production start up on the F-111 fleet.

[17] 10 USCS § 2466 Contracting for Performance of Civilian Commercial or Industrial Type Functions, Limitations on the Performance of Depot Maintenance and Repair Activities, 1999.

[18] 10 USCS § 2464 Contracting for Performance of Civilian Commercial or Industrial Type Functions, Core Logistics Capabilities, 1999.

[19] Ibid. Subsection (b)(1) through (3).

[20] These guidelines ensure that sufficient controls are put in place to adequately describe workload scope, performance objectives, and that cost comparison methodologies account for the differences between public and private sector accounting systems.

[21] 10 USCS § 2469 Contracting for Performance of Civilian Commercial or Industrial Type Functions, Requirements for Competition, 1999.

[22] " 'Core Capability' Keeps Some Work out of Private Hands", *Air Force Times*, April 26, 1999.

[23] The retention of only 24% of the F-100 workload is consistent with Title 10 of the United States Code Section 2464, because the Code specifies that an organic capability must be established, but not the percentage of any specific workload to be retained organically. Additionally, Title 10 of the United States Code Section 2466 specifies that up to 50% of the depot maintenance and repair workload may be contracted to the private sector, but not the percentage of any specific workload to be contracted.

[24] 10 USCS § 2469a Contracting for Performance of Civilian Commercial or Industrial Type Functions, Use of Competitive Procedures in Contracting for Performance of Depot-Level Maintenance and Repair Workloads Formally Performed at Certain Military Installations, 1999.

[25] Ibid. Subsection (c)(1) through (3), Exceptions.

[26] Ibid. Subsection (e), Contracts for Multiple Workloads.

[27] United States General Accounting Office report to Congress on Public-Private Depot Competition, Page 2, May 12, 1999.

[28] Ibid.

[29] Testimony of the Ms. Nancy H. Schaffer, Zone 7 President, Federal Managers Association, to the House National Security Committee on Readiness holding a hearing Distribution of Military Upgrade and Repair Workload, March 18, 1997, Pages 2 through 9.

[30] Testimony of the General Lester Lyles, Vice Chief of Staff, U.S. Air Force, to the House Armed Services Committee holding a hearing on Depot Maintenance, February 29, 2000.

[31] United States General Accounting Office report to Congress on Depot Maintenance Workload Allocation and Reporting, Page 2, July 13, 1999.

[32] Ibid. Page 5.

[33] Ibid. Pages 7-11.

[34] United States General Accounting Office report to Congress on Defense Depot Maintenance, Public and Private Sector Workload Distribution Reporting Can Be Further Improved, Page 5, July 23, 1998.

[35] Ibid. Page 19.

Notes

[36] Interview with Brigadier General Stan Sieg, Director of Logistics, Air Force Material Command by the *Air Force Times*, Volume 60, Issue 60, Page 28, September 27, 1999.

[37] Interview with Mr. William Johnson, Legislative Director for Congressman James Hansen (R-Utah) *Air Force Times*, Volume 35, Issue 31, Page 5, September 6, 1999.

[38] United States General Accounting Office report to Congress on Defense Depot Maintenance, Contracting Approached Should Address Workload Characteristics, Page 2, June 15, 1998.

[39] Total LCC contribution – System Research and Development 10%, Production 30%, and Operation and Support 60%.

[40] "Cradle to Grave: Ideas about Supportability," Logistics Spectrum, Pages 23-25, January-March 1999.

[41] United States General Accounting Office report to Congress on Defense Depot Maintenance, DoD Shifting More Workload for the New Weapons Systems to the Private Sector, Page 14, March 31, 1998.

[42] "Cradle to Grave: Ideas about Supportability," Logistics Spectrum, Pages 23, January-March 1999.

[43] United States General Accounting Office report to Congress on Defense Depot Maintenance, DoD Shifting More Workload for the New Weapons Systems to the Private Sector, Pages 14-15, March 31, 1998.

[44] Ibid. Pages 15 and 16.

[45] Testimony of Mr. J.S. Gansler, Undersecretary of Defense for Acquisition and Technology to the House Military Readiness Subcommittee on Depot Maintenance and Repair, February 25, 1998.

[46] United States General Accounting Office report to Congress on Defense Depot Maintenance, Contracting Approached Should Address Workload Characteristics, Page 5, June 15, 1998.

[47] United States General Accounting Office report to the Honorable Walter B. Jones, House of Representatives on Weaknesses in the T406 Engine Logistics Support Decision Methodology, Page 2, September 14, 1998.

[4848] Ibid. Page 10.

[49] "Depot Utilization and Commercialization", William N. Washington, Directorate of Resource Management, HQ CECOM, Pages 305 through 315, *Acquisition Review Quarterly*, Summer 1999.

[50] United States General Accounting Office report to Congress on Defense Depot Maintenance, Contracting Approached Should Address Workload Characteristics, Page 7, June 15, 1998.

[51] Testimony of Henry L. Hinton, Jr. Assistant Comptroller General, national Security and International Affairs Division, United States General Accounting Office to the Readiness Subcommittee of the Senate Armed Service Committee on Access to records Inhibiting Work on Congressional Mandates, March 4, 1998.

[52] "The Air Force Steps in to Help Save Two Depots", *Air Force Times*, Volume 58, Issue 41, Page 28, May 18, 1998.

[53] Ibid.

Notes

[54] Committee Hearing by the House Committee on National Security regarding Air Force Depot Maintenance Workload, Page 4 of 44, June 4, 1998.

[55] "Privatizing an Air Force Depot – Closure of Newark Air Force Base, Ohio', Lt. Colonel Paul Stripe, USAF, Pages 42 through 46, *Project Manager*, March-April 1997.

[56] Ibid.

[57] Ibid.

[58] Committee Hearing by the House Committee on National Security regarding Air Force Depot Maintenance Workload, Pages 5,6 and 16 of 44, June 4, 1998.

[59] United States General Accounting Office report to the Senate Committee on Armed Services on Public-Private Competitions, Reasonable Processes Used for Sacramento Depot Maintenance Award, May 12, 19.

[60] United States General Accounting Office report to Congress on the Use of Private-Public Partnering Arrangements, Pages 1 through 3, May 7, 1998.

[61] These laws include: (1) 10 USCS § 2469; (2) 10 USCS § 4543; (3) 10 USCS § 2553; (4) 10 USCS § 2471; and (5) the National Defense Authorizations of 1995, 1998, and 1999.

[62] Ibid. Pages 6 through 10.

[63] "Tinker Depot, Lockheed Martin Win Engine-Repair Contract", *Air Force Times*, Volume 59, Issue 30, Page 19, March 1, 1999.

[64] United States General Accounting Office Report to Congress on Public-Private Depot Competitions, May 27, 1999.

[65] Major General Bob Courter, AFMC/XR, Summer '99 Commanders' Business Conference, August 5-6, 1999.

[66] Ibid.

[67] As demonstrated by the Regan Administration initiatives to budget and procure additional replacement spare to support deployed weapons systems.

[68] Major General Bob Courter, AFMC/XR, Summer '99 Commanders' Business Conference, August 5-6, 1999.

Section 3

Conclusions

Unless current trends are reversed, within three years the Air Force will be unable to sustain our current commitments in Iraq, Kosovo, and Bosnia and military operations other than war; much less, two simultaneous Major Theater Wars whose duration exceeds forty-five days. Aircraft mission capable status rates will remain below 70% into the foreseeable future. War readiness spare replacement procurements will not be adequate to replace existing shortfalls and will not fully consider the consumption rates generated by current operational tempos. The general themes described above do not solely apply to the Air Force, although Air Force logistics is the focus of this research. They apply to all service branches and their acquisition and logistics planners.

Politics

Foreign policy commitments will continue to require Air Force combat and combat support unit deployments at least equal to, and quite possibly greater than, current levels. There is no evidence of the existence of any 'end-game' strategy to conclude existing commitments or to resist the temptation to commit military resources in additional theaters. Should the new presidential administration of 2001 chose to reduce the existing commitments, budgets are not in place to return our military forces to their pre-deployment bases or to replace the equipment lost or expended.

The Congress will continue to pressure the DoD to compete and award the maximum allowable, under law, depot maintenance and repair workload to the civilian sector. Election-year and Air Force inter-command politics will continue to contribute negatively toward the accomplishment of logistics support planning and budgeting objectives.

Budgets

The competition for Congressional out-year budget allocations between domestic social-engineering programs and a strong national defense will continue to result in budget shortfalls for national defense. Within the national defense budget, competition between new weapons system acquisition and the procurement of replacement spare and maintenance parts will continue to result in budget shortfalls for spare and replacement parts. Depot maintenance and repairable spare procurements do not have the glamour to generate sustained, energetic interest or support in either the Congressional or military budget planning communities. As a result, Air Force and DLA out-year budget allocations will not increase sufficiently to fund required depot maintenance and repair activities or provide for adequate replacement of reparable spares (D041 items – exchangeable, field replaceable units) and common maintenance items (Class IX— consumable spare parts), which are used by depot maintenance and repair facilities in support of their assigned workloads. Current and out-year planning year budgets do not support AFMC facility modernization and manpower recruiting and training requirements, which provide the basis for the realization of AFMC initiatives to: reduce the cost of AFMC products; reduce maintenance flow days; increase labor effectiveness; and reduce quality defects.

Law

Sufficient law and guidance are in place to provide Air Force acquisition and logistics planners the means to reduce depot maintenance and repair costs through competitive bid solicitations consisting of core and other-than-core workloads targeted and private-public partnerships or private contractors. However, the opportunities for the potential savings to be gained from these competitive solicitations will not be realized unless senior Air Force senior leaders make it very clear to acquisition and logistics community managers that it is the preferred method of doing business.

Acquisition Strategies

There is no historical evidence that major weapon system contractors will voluntarily provide major weapons systems designs that will meaningfully reduce depot maintenance and repair costs. Without a substantial increase in Air Force senior leadership's emphasis, there will continue to be ineffective communications between the Air Force acquisition and logistics communities during major weapons system acquisition and initial deployment, which will result in higher that forecasted weapons system depot maintenance and repair costs. This ineffectiveness is caused by inadequate management information systems, lack of understanding between acquisition and logistics managers in terms of their needs, and absence of a focused end-game strategy to reduce depot maintenance and repair costs during the acquisition. Improvements must be made or this ineffective process will continue to drive weapon system life cycle costs above budget planning figures.

Contracting Practices

The reliance upon major weapon system manufacturers as the principle source of contractor support for depot maintenance and repair has created an incestuous relationship between the Air Force and its major weapon system suppliers. This relationship has resulted in unacceptably high contracting costs and the unwillingness of Air Force managers to actively seek more cost effective options. Air Force senior leaders actively protect government owned and operated depots and their major weapon system suppliers and are not advocates for depot maintenance and repair cost reductions by creating downward pricing pressures in the marketplace. The Air Force has not developed innovative and businesslike approaches to attract new depot maintenance and repair civilian contractor service suppliers. Unless contract solicitations encourage competition by attracting more qualified bidders there will be no meaningful window of opportunity to reduce or curb the increases in depot maintenance and repair costs.

Section 4

Recommendations

A long-term commitment must be made by the logistics and acquisition communities to emphasize a business-oriented, cost-conscious approach in decisions regarding opportunities to identify and implement activities and programs that could reduce the cost of depot maintenance activities. This commitment should be codified by written, reportable objectives that are tied directly to DoD and Air Force strategic and budget planning cycles. Progress reports should be provided through the Air Staff and the JCS to the Congress. In this manner, DoD can demonstrate its progress toward meeting its commitments toward implementing Congressional directives, which will provide a creditable basis for soliciting future Congressional support for DoD sponsored new major weapons system development and procurement initiatives.

Acquisition Strategies

Air Force acquisition and logistics managers are in the position, during new major system acquisition and deployed major weapons system modernization, to provide mechanisms that can significantly contribute toward the reduction depot maintenance and repair costs. The central focus of the following recommendations is to reduce the start-up cost requirements for new civilian contractors to enter the depot maintenance and repair environment with a long-term goal of providing competitive marketplace pricing

pressures in order to reduce the depot maintenance and repair costs. These activities will require five to ten years to reach fruition because of the time line of major weapon system acquisitions.

New major systems acquisition and deployed systems modernization Requests for Quote (RFQ) should contain a requirement that at least 25% of the subsystems or major system components meet the definition of a commercial item. These subsystems and major components shall require only commercially available measurement, test, and inspection equipment for the performance of depot maintenance and repair activities. This will remove the necessity to develop a 'core logistics support capability' by government depots, thereby providing ready candidate workloads for competitive placement into civilian-owned and operated depot maintenance and repair facilities.

New major systems acquisition and deployed systems modernization Requests for Quote (RFQ) should contain a requirement that all of the design and technical data be provided when no more that 35% of the initial procurement is delivered or within four years of initial deployment, which ever is sooner. Air Force ownership of the design and technical data will provide the basis for attracting competitors other than the Original Equipment Manufacturer (OEM) when competitive solicitations are issued for depot maintenance and repair of the subsystems of major items. The resulting increase in competitors will provide the basis for less expensive Air Force contracts for depot maintenance and repair workloads performed by the civilian sector or government-civilian partnerships.

In all but the most extraordinary cases, contracts to civilian contractors for depot maintenance and repair should not include a provision for Air Force to supply the

contractor with repair parts or materials. The contractor should be contractually encouraged to be completely responsible for timely, cost-effective workload maintenance and repair with minimum reliance on Air Force assets or assistance. This includes the procurement of measurement, test, and inspection equipment as well as repair parts.

Contracting Practices

After major weapon system deployment, AFMC system and item managers are responsible for procurement of DO41 items – exchangeable, field replaceable units – and contracting for cost effective depot maintenance and repair work. Successful accomplishment of these activities requires timely and meaningful information. The central focus for the following recommendations is to improve the contracting process with a goal of reducing the overall cost of depot maintenance repair activities.

The lack of management information contributes to inefficient procurement of DO41 items. A meaningful maintenance data collection system must be developed and implemented that will provide component level failure mode and mechanism information to system and item managers. This management information system should uniformly collect information from all depot maintenance and repair facilities. Lessons learned from this information can be compiled and incorporated into the bid specifications for replacement exchangeable, field replaceable units with a goal of increasing the useable field life and improving the maintainability of the procured item.

Applicable business practices from the civilian business sector must be incorporated into the AFMC management model. Civilian sector businesses effectively employ their capital by investing in facility, equipment, and manpower in a focused manner to support their market niche. The capabilities developed as a result of these activities are identified,

as the business's distinctive or core competences. These competences are improved and strengthened by continued investment of resource into similar or closely related activities in a process called vertical integration. AFMC must incorporate this model when structuring contract offerings for depot maintenance and repair workloads. This approach will encourage cost effective, efficient depot maintenance and repair capability development in both the government and civilian sectors.

To reduce the total number and hence the overall cost of DO41 items required to support operational needs and the maintenance pipeline, a mechanism should be established to instruct and empower the end users to receive instructions for shipping repairable items directly to the depot facility—public, private, or public-private partnership—that provides the depot maintenance and repair. Additionally, a mechanism should be established should be established to instruct and empower the depot facility to ship the serviceable item directly to the end user or a designated supply point.

AFMC can make additional contributions toward containing the cost of depot maintenance and repair reducing the scope of planned depot maintenance from Core-Plus to Core. This would place AFMC clearly in compliance with Congressional and DoD directives, providing for more efficient use of its budget allocation by reducing the number of programs competing for limited funds, and possible reduce management and skilled labor manpower requirements.

The recommendations provided above are mid-to-long term activities whose resulting cost savings potential for depot maintenance and repair is very significant. However tempting it may be to reorganize, restructure, and reengineer in order to produce the illusion of cost reductions and goal realization, AFMC and its other service

counterparts must stay-the-course and accept that there will not be a return to the 'business as usual' of the 1970s and 1980s. A resurgence and growth of organic depot maintenance and repair capability, regardless of the mixed signals received from the executive and legislative branches is not in the political cards. Therefore it is in the best interest of the Air Force to aggressively implement acquisition and contracting strategies to reduce depot maintenance and repair costs in order to obtain the best use of budgeted funds.